

- 10 -

## CLAIMS

1. A personal locator beacon including:  
an outer case open at one end and an inner case having a major portion removably  
5 received within the outer case leaving a minor portion extending outside the outer case;  
a wireless transmitter and a power supply within the inner case; and  
a switch for automatically connecting the power supply to the wireless transmitter  
to thereby activate the wireless transmitter to transmit a signal when the major portion of  
the inner case is removed from the outer case.  
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2. A personal locator beacon according to claim 1, wherein the switch is not operable  
to disconnect the power supply from the wireless transmitter after the major portion of the  
inner case has been removed from the outer case whereby the beacon is a single-use  
beacon.  
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3. A personal locator beacon according to claim 1 or 2, wherein the switch is a sliding  
switch slidably mounted within the inner case in an open position when the major portion  
of the inner case is disposed within the inner case, the sliding switch engaging one end of  
an activation pin slidably mounted in the inner case and the other end of the activation pin  
20 projecting exteriorly of the inner case in a gap provided between facing surfaces of the  
major portion of the inner case and the outer case, wherein the projecting end of the  
activation pin is depressed into the inner case by a ramp on an inner surface of the outer  
case during removal of the major portion of the inner case from the outer case so that the  
activation pin moves the sliding switch to a closed position whereby the wireless  
25 transmitter is activated.
4. A personal locator beacon according to claim 3, wherein the sliding switch freely  
engages with and releases from the activation pin so that the sliding switch cannot be  
returned to the open position by withdrawing the activation pin from the inner case.

30

- 11 -

5. A personal locator beacon according to any preceding claim, wherein the inner case and the outer case are releasably locked together via a locking pin when the major portion of the inner case is disposed within the outer case, the locking pin extending through a hole formed in the closed end of the outer case, one end of the locking pin releasably locking  
5 the inner case and the outer case together and the other end of the locking pin being provided with a pull ring disposed exteriorly of the outer case, wherein pulling the pull ring away from the closed end of the outer case unlocks the inner case from the outer case so that the major portion of the inner case can be removed from the outer case whereby the wireless transmitter is activated.
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6. A personal locator beacon according to claim 5, wherein, in use, the personal locator beacon is attached to a user via the pull ring such that the radio transmitter can be activated by the user pulling the minor portion of the inner case with one hand away from the attached pull ring.
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7. A personal locator beacon according to any preceding claim, further including an antenna operatively connected to the wireless transmitter.
8. A personal locator beacon according to claim 7, wherein the antenna is an external  
20 whip antenna on the major portion of the inner case that is biased compressed when the major portion of the inner case is disposed within the outer case such that the antenna automatically springs to deploy when the major portion of the inner case is removed from the outer case.
- 25 9. A personal locator beacon according to claim 8, wherein the inner case is adapted to float with a lower portion below a waterline when the beacon is deployed on water, and wherein on deployment the antenna springs upwardly away from the lower portion of the inner case to a generally upright extended position above the waterline.

- 12 -

10. A personal locator beacon according to any preceding claim, further including a microprocessor and an associated memory for selectively controlling the wireless transmitter.
- 5 11. A personal locator beacon according to claim 10, wherein the memory is programmable to store a selected signal for transmission by the wireless transmitter.
12. A personal locator beacon according to any preceding claim, wherein the signal transmitted by the wireless transmitter is a voice message.
- 10 13. A personal locator beacon according to any preceding claim, further including a GPS receiver for receiving GPS location data, and wherein the signal transmitted by the wireless transmitter includes GPS location data.
- 15 14. A personal locator beacon according to any preceding claim, wherein the beacon is portable and has a volume of less than around  $150 \text{ cm}^3$  when the major portion of the inner case is disposed within the outer case.
- 20 15. A personal locator beacon according to claim 14, wherein the beacon has a volume of around  $75 \text{ cm}^3$  when the major portion of the inner case is disposed within the outer case.
- 25 16. A personal locator beacon according to any preceding claim, further including a speaker or an audible alarm transducer.
17. A personal locator beacon according to any preceding claim, further including a display panel for displaying information associated with the beacon.
- 30 18. A personal locator beacon according to any preceding claim, further including a thread interconnecting the inner case and the outer case when the major portion of the inner case is removed from the outer case, wherein the thread is frangible and/or reflective.

- 13 -

19. A personal locator beacon according to any preceding claim, wherein the beacon is adapted to float.

5 20. A personal locator beacon according to any preceding claim, wherein the wireless transmitter is a radio transmitter and the signal transmitted by the wireless transmitter is a radio signal.

21. A personal locator beacon according to claim 20, wherein the radio transmitter is a  
10 UHF radio transmitter and the radio signal is a UHF radio signal.

22. A personal locator beacon according to claim 20 or 21, further including a radio receiver.

15 23. A personal locator beacon substantially as described with reference to the accompanying drawings.